



Financial reform and mortgage lending by systemically important financial institutions[☆]

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ABSTRACT

We use proprietary transaction-level data from Intercontinental Exchange to examine how the Dodd–Frank Wall Street Reform and Consumer Protection Act (DFA) affected mortgage risk-taking by the six largest US financial institutions (SIFIs). Following DFA, these banks originated fewer mortgages, with lower average loan-to-value (LTV) ratios, and fewer high-LTV mortgages compared to other lenders. Our findings suggest that DFA curtailed risk taking among SIFIs but coincided with increased high-LTV lending by non-SIFIs, indicating a redistribution of risk to less regulated institutions. We provide the first transaction-level evidence linking DFA to measurable shifts in mortgage risk.

1. Introduction

In 2009, President-elect Obama announced plans for sweeping financial reform. The Dodd–Frank Wall Street Reform and Consumer Protection Act (DFA) was signed into law in July 2010 to promote financial stability amid an ongoing crisis driven by excessive risk-taking, limited oversight, and widespread subprime issuance (Demyanyk and Van Hemert, 2011; Mian and Sufi, 2009; Keys et al., 2010). Once securitized and distributed throughout the financial system, the collapse in housing prices prompted loan defaults, substantial losses, a breakdown of confidence, and freezing of credit markets (Brunnermeier, 2009).

DFA's more than 2,000 pages of legislation targeted vulnerabilities through several major provisions, including the creation of the Financial Stability Oversight Council (FSOC) to designate and oversee systemically important financial institutions (SIFIs), establishing the Consumer Financial Protection Bureau (CFPB) to regulate consumer financial products, and enhanced stress testing and resolution planning for large banks. These tools were designed to reduce systemic risk and protect consumers from predatory lending practices (Chronopoulos et al., 2023).

Responding to smaller institutions' concerns about regulatory burdens, Congress later passed the Economic Growth, Regulatory Relief,

and Consumer Protection Act (EGRRCPA) in 2018. This raised the SIFI designation asset threshold from \$50 billion to \$250 billion, exempting many medium-sized institutions. Stress testing and resolution planning remained for the largest SIFIs (Chronopoulos et al., 2023). The current regulatory direction remains uncertain, reinforcing the need to evaluate earlier reforms.

This study focuses on DFA rather than examines whether it differentially affected mortgage lending by SIFIs compared to non-SIFIs. While much literature explores DFA's effects on credit supply, disclosure quality, and systemic risk (Kleymenova and Zhang, 2019; Dimitrov et al., 2015; Hogan and Burns, 2019), few consider housing market outcomes. One exception is (Fuster et al., 2021), who find CFPB oversight reduced Federal Housing Administration loan originations and foreclosures. We contribute by providing new transaction-level evidence on mortgage risk-taking.

We use previously unexplored data from Intercontinental Exchange's (ICE) real estate transactions database to link loan-to-value (LTV) ratios with lender identity and property characteristics for home purchases in Ohio before and after DFA. This granularity allows for more precise identification of changes in risk-taking than institution-level studies. Using a difference-in-differences (DiD) framework, we find that after

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¹ We define high-LTV mortgages as those with LTV ratios above 0.80, typically requiring private mortgage insurance.

Table 1
Mortgage characteristics by lender type and DFA period.

		Pre-DFA		Post-DFA	
		Non-SIFI	SIFI	Non-SIFI	SIFI
Sale price	Mean	\$146,653	\$157,127	\$172,485	\$183,925
Loan amount	Mean	\$121,916	\$129,453	\$153,154	\$155,498
Loan-to-value	Mean	0.86	0.86	0.90	0.86
Loan-to-value > 0.80 indicator (%)		65,219 (54%)	4,695 (50%)	252,944 (73%)	7,543 (59%)
Observations (%)		120,826 (92.8%)	9,400 (7.2%)	346,601 (96.4%)	12,762 (3.6%)

Note: This table reports mean of mortgage characteristics by lender type and time period. The second-to-last row presents the number and share of mortgages with LTV ratios exceeding the 0.80 threshold, and the row reports the total number of observations.

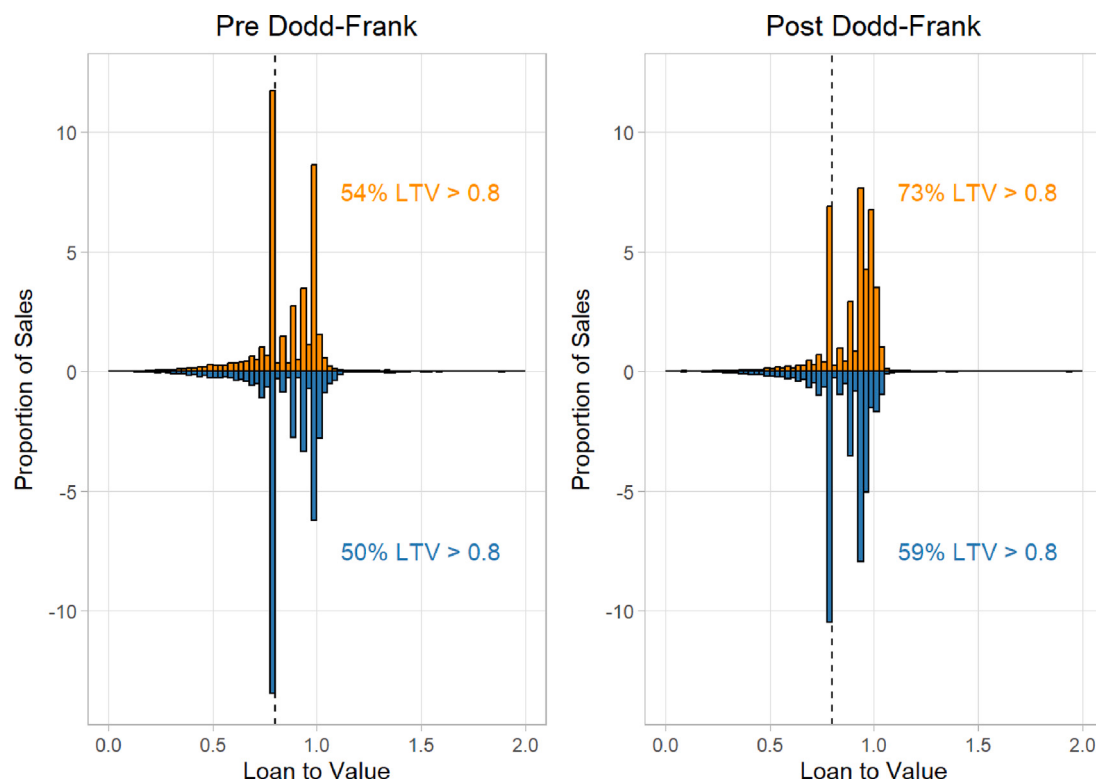


Fig. 1. LTV distribution by lender type. *Note:* The blue/lower distributions represent the LTV ratios of SIFIs and the orange/upper are those of non-SIFIs.

DFA, the six largest US banks (Wells Fargo, JPMorgan Chase, Citigroup, Bank of America, Goldman Sachs, Morgan Stanley) originated fewer mortgages with lower average LTV ratios and were less likely to issue high-LTV mortgages.¹ Meanwhile, non-SIFIs increased their high-LTV mortgage lending. These findings align with DFA's intent to reduce systemic risk and suggest a redistribution of mortgage credit risk to less regulated institutions. To our knowledge, this is the first transaction-level evidence linking DFA to measurable changes in SIFI mortgage origination behavior.

2. Data

Using transaction-level data from ICE, containing deed records in Ohio, we study arm's-length transactions for single-family residences. For each transaction, we calculate the LTV ratio as the mortgage amount divided by sale price, retaining observations with LTVs between 0 and 2. Mortgages are classified as SIFI if the lender is one of the six major banks that have maintained SIFI status since DFA's enactment. The post-DFA period is defined as mortgages originated after July 2010, excluding sales from January–September 2010.

Table 1 shows pre-DFA, SIFIs originated larger mortgages, yet mean LTVs remained similar. After DFA, non-SIFI's mean LTV rose while that of SIFIs stayed flat. The share of high-LTV mortgages (above 0.80) was slightly larger for non-SIFIs (54%) than SIFIs (50%) pre-DFA, but by the post-period had risen to 73% for non-SIFIs and only 59% for SIFIs. These patterns are also shown in Fig. 1, which shows mirrored density plots of LTV ratios by lender type in the pre- and post-DFA periods. There is pronounced bunching around the 0.80 threshold in both cases. For SIFIs, the distribution shape stays mostly intact post-DFA, but there is a rise in high-LTV mortgages, indicating greater risk-taking by less regulated institutions.

As shown in the top panel of Fig. 2, SIFIs expanded their share of mortgage lending prior to DFA, peaking near 12% in 2009. After DFA, this fell below 8% in 2011 and below 3% in 2022. The bottom panel shows the share of high-LTV mortgages over time. Before 2010, SIFI and non-SIFI shares move together. After DFA, the SIFI share hovers around 60%. Meanwhile, non-SIFI high-LTV mortgage lending increased annually, peaking near 80% in 2020. This divergence aligns with a shift in high-risk lending away from heavily regulated institutions. Together with parallel trends in the pre-reform period, these

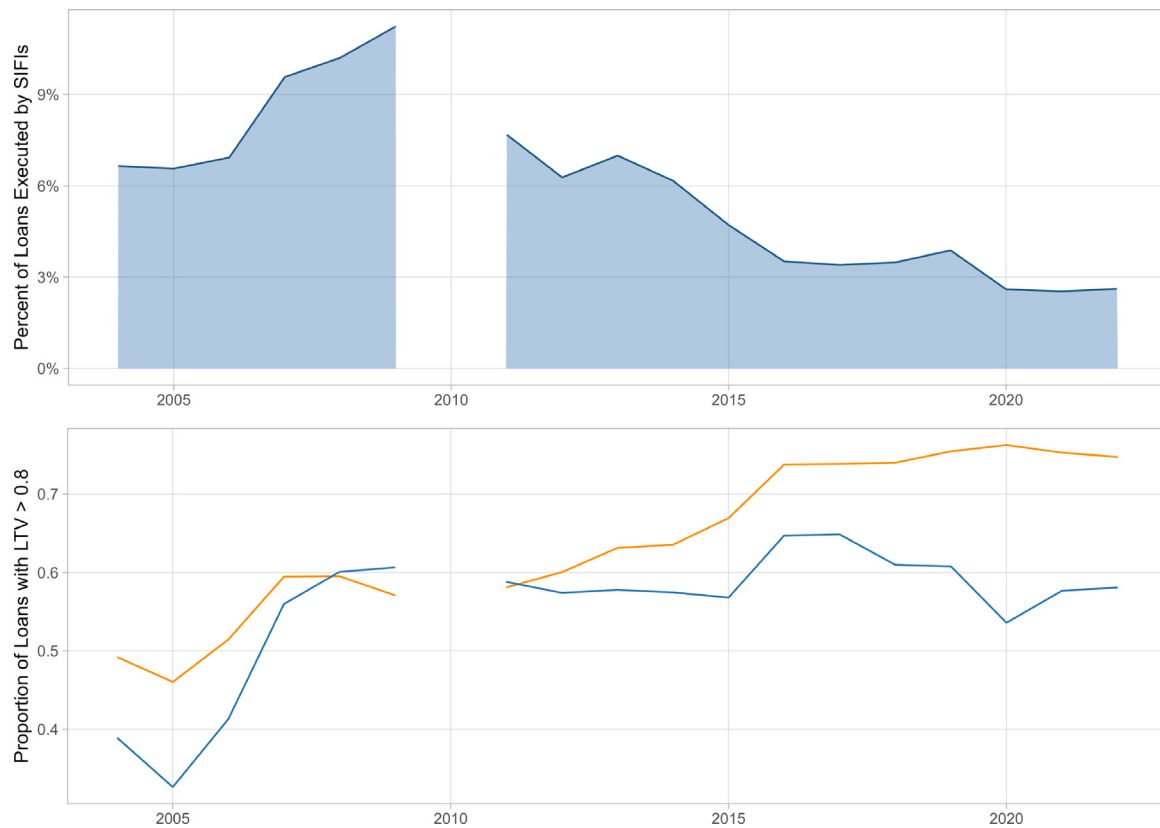


Fig. 2. Trends in SIFI market share and high-LTV lending.

Note: The top panel shows the annual share of mortgages originated by SIFIs. The bottom panel shows the share of mortgages with $LTV > 0.80$ by lender type (blue = SIFIs, orange = non-SIFIs).

patterns motivate our difference-in-differences analysis of whether DFA caused a reallocation of high-LTV mortgage lending from SIFIs to non-SIFIs.

3. Method and results

We examine whether the post-DFA shift in high-LTV lending toward non-SIFIs reflects a change in lending behavior using a DiD approach similar to Chronopoulos et al. (2023), Bouwman et al. (2018), and others.

$$Y_{ijt} = \alpha \text{SIFI}_i + \beta \text{PostDFA}_t + \gamma (\text{SIFI}_i \times \text{PostDFA}_t) + \phi X_{ijt} + \tau_i + \theta_j + \varepsilon_{ijt}. \quad (1)$$

Y_{ijt} is the LTV ratio for property i in county j at time t . X_{ijt} includes property-level controls; τ_i and θ_j denote month and county fixed effects. Standard errors are clustered by year-month. The interaction term γ measures the relative change in LTV for SIFIs after DFA (i.e., average treatment effect on the treated). We also estimate a linear probability model with a high-LTV indicator, so that γ captures changes in the likelihood that a SIFI originates a high-LTV mortgage post-DFA.

Table 2 shows that after DFA, SIFIs originated mortgages with significantly lower LTVs than non-SIFIs. The interaction term is negative and significant in all models, implying that SIFIs reduced their LTVs by 2.63 percentage points more than non-SIFIs post-DFA. Using the high-LTV outcome, SIFIs were 7.72 and 7.97 percentage points less likely to originate high-LTV mortgages post-DFA according to models with and without home controls, respectively. This supports the view that SIFIs disproportionately reduced riskier lending, consistent with Figs. 1 and 2.

To assess timing and pre-trends, we estimate an event study version, replacing the post-DFA dummy with year-specific interactions. Fig. 3 plots the estimated coefficients (with 95% confidence intervals) from

Table 2

DFA's Impact on LTV Ratios and High-LTV Lending.

	Dependent variable:			
	Loan-to-value (1)	(2)	Loan-to-value > 0.80 (3)	(4)
SIFI	−0.0102*** (0.0029)	−0.0069** (0.0027)	−0.0559*** (0.0092)	−0.0443*** (0.0086)
Post-DFA	0.0381*** (0.0020)	0.0375*** (0.0020)	0.1994*** (0.0079)	0.1972*** (0.0077)
SIFI×Post-DFA	−0.0271*** (0.0033)	−0.0263*** (0.0032)	−0.0797*** (0.0112)	−0.0772*** (0.0108)
House Characteristics	–	Y	–	Y
Observations	437,710	437,710	437,710	437,710
Within R ²	0.01171	0.03610	0.02996	0.05916

Note: This table reports coefficients from difference-in-differences regressions where the dependent variable is either the continuous loan-to-value (LTV) ratio or an indicator equal to 1 if $LTV > 0.80$. Each model includes county and month fixed effects. Standard errors are clustered by year-month. Control variables have been omitted for brevity but are available upon request. Significance is denoted by * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

LTV and high-LTV regressions. Each coefficient reflects the difference between SIFIs and non-SIFIs in a given year, relative to 2010. After DFA, both panels show a persistent divergence. The SIFI/non-SIFI gap in LTV and high-LTV originations widened and persisted through the end of the sample, reinforcing the interpretation that DFA induced risk reductions in mortgage lending by SIFIs.

The coefficient estimates for 2004–2007 are also negative and statistically significant. This helps to show SIFIs were ramping up their mortgage lending in the years leading up to the Great Recession, as

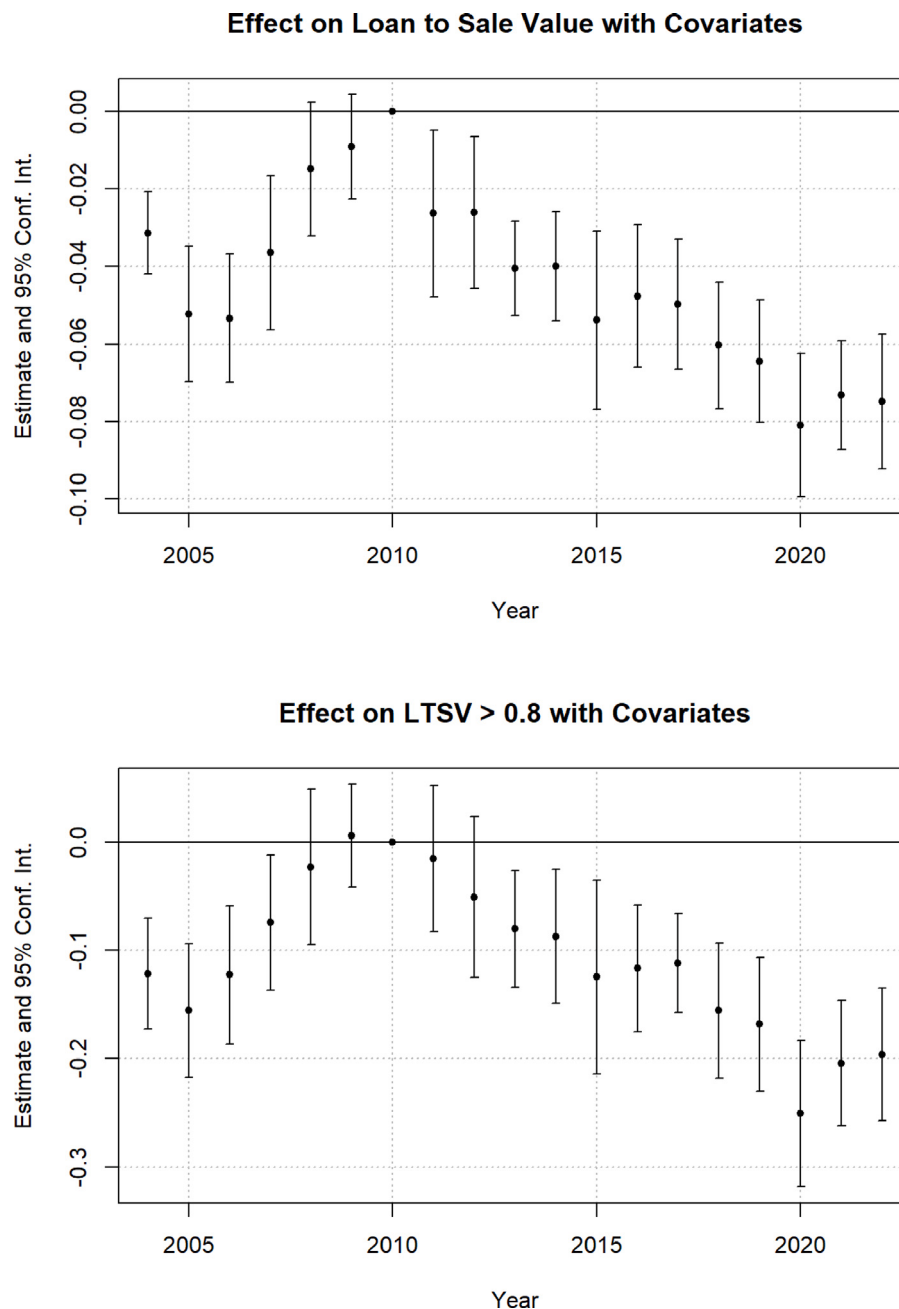


Fig. 3. Event study estimates.

Note: These figures show estimated coefficients and 95% confidence intervals from regressions interacting SIFI status with year indicators. The top panel uses the LTV ratio as the dependent variable; the bottom panel uses a binary indicator for $LTV > 0.80$. The omitted year is 2009. Standard errors are clustered by year-month.

2008 and 2009 are statistically indifferent from 2010. Importantly, these align with Fig. 2, which shows a clear decline in high-LTV lending by SIFIs after DFA. Overall, these suggest a meaningful and sustained regulatory-induced reduction in risk-taking by SIFIs.

4. Conclusion

Using novel transaction-level mortgage data, we provide the first evidence that the Dodd–Frank Act (DFA) curtailed high loan-to-value (LTV) mortgage lending by the six largest US financial institutions (SIFIs). Relative to smaller lenders, SIFIs significantly reduced both the average LTV and the likelihood of originating mortgages above 0.80.

DFA reduced SIFI risk-taking but shifted high-risk lending to non-SIFIs, reflecting both intended and unintended regulatory effects. That

is, these findings highlight how post-crisis regulation affected not only the level but also the distribution of mortgage credit risk. Future research could examine whether similar shifts emerged elsewhere or whether the 2018 partial rollback reversed these trends.

Data availability

The authors do not have permission to share data.

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